

## GENERAL NOTES

1. ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST REVISION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND THE UNIFORM STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION AS SPONSORED AND DISTRIBUTED BY THE MARICOPA ASSOCIATION OF GOVERNMENTS (MAG), AND AS ADOPTED BY THE CITY OF SIERRA VISTA'S DEVELOPMENT CODE.
2. ALL PERMITS FROM APPLICABLE GOVERNMENT AGENCIES NECESSARY FOR CONSTRUCTION SHALL BE ACQUIRED PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS NECESSARY FOR THE COMPLETION OF THIS PROJECT.
3. ALL REQUIRED AND APPLICABLE TRAFFIC CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR AND SUBJECT TO REVIEW AND APPROVAL BY THE CITY AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
4. TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
5. THE LOCATIONS OF THE UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND ALL UTILITIES ARE NOT NECESSARILY SHOWN. THE CONTRACTOR SHALL CALL ARIZONA 811 (BLUESTAKE) AT 811 AND ANY NON-PARTICIPATING UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO BEGINNING ANY WORK FOR FIELD LOCATION OF ALL EXISTING UTILITIES WITHIN PROPOSED CONSTRUCTION AREA.

### UTILITY CONTACTS MAY INCLUDE:

ELECTRIC: SULPHUR SPRINGS VALLEY ELECTRIC  
WATER: (PROVIDED BY ENGINEER/DEVELOPER)  
TELCOM: (PROVIDED BY ENGINEER/DEVELOPER)  
GAS: (PROVIDED BY ENGINEER/DEVELOPER)  
SEWER: CITY OF SIERRA VISTA, 520-458-5775  
TRAFFIC SIGNALS: CITY OF SIERRA VISTA, 520-458-5775  
SOLAR LIGHTING: CITY OF SIERRA VISTA, 520-458-5775

6. ALL TRENCHING SHALL BE IN ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATION 29, CFR PART 1926, SUB-PART P, "EXCAVATIONS."
7. ALL PUBLIC WORKS IMPROVEMENTS CONSTRUCTED IN THE PUBLIC RIGHT OF WAY SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL BY THE CITY OF SIERRA VISTA. CONSTRUCTION SHALL NOT COMMENCE UNTIL A RIGHT OF WAY PERMIT HAS BEEN ISSUED FOR SUCH CONSTRUCTION. IF WORK HAS BEEN DISCONTINUED FOR ANY REASON, IT SHALL NOT BE RESUMED UNTIL APPROVAL HAS BEEN OBTAINED FROM THE DEPARTMENT OF PUBLIC WORKS.
8. THE DEPARTMENT OF PUBLIC WORKS SHALL BE NOTIFIED 24 HOURS PRIOR TO BEGINNING ANY WORK.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING A PERSON WHO IS AUTHORIZED AND CERTIFIED UNDER TITLE 32-142 OF THE ARIZONA REVISED STATUTES TO PERFORM MATERIALS TESTING AND CONDUCT THE TESTING OF ALL

MATERIALS USED IN THE CONSTRUCTION OF PUBLIC WORKS IMPROVEMENTS.

10. THE RESULTS OF **ALL** TESTS SHALL BE PROVIDED TO THE DEPARTMENT OF PUBLIC WORKS PRIOR TO THE FINAL INSPECTIONS AND DURING THE CONSTRUCTION PHASE OF ALL RIGHT OF WAY, EASEMENT, AND CITY PROPERTY IMPROVEMENTS.
11. THE CONTRACTOR SHALL CALL AND REQUEST A FINAL INSPECTION TO CLOSE OUT ALL RIGHT OF WAY PERMITS.
12. THE GENERAL CONTRACTOR (NOT SUBCONTRACTOR) SHALL CALL IN TO THE RIGHT OF WAY HOTLINE AT 520-459-3868 TO NOTIFY THE DEPARTMENT OF PUBLIC WORK WHEN WORK IS ANTICIPATED TO BEGIN AND TO SCHEDULE ALL INSPECTIONS FOR WORK INVOLVING RIGHT OF WAY PERMITS.
13. THE GENERAL CONTRACTOR (NOT SUBCONTRACTOR) SHALL CALL OR SUBMIT REQUEST FOR BUILDING PERMIT INSPECTIONS. IF WORK IS BEING PERFORMED BY PROPERTY OWNER, THE OWNER SHALL CALL IN FOR SCHEDULING INSPECTIONS. THE FOLLOWING OPTIONS ARE AVAILABLE FOR SCHEDULING:
  - A. CALL: 520-417-4413
  - B. EMAIL: [Planning@sierravistaaz.gov](mailto:Planning@sierravistaaz.gov)
  - C. ONLINE SCHEDULING:  
<https://www.sierravistaaz.gov/our-city/departments/community-development/building-permits/permits-inspections/request-an-inspection>
14. THE CONTRACTOR SHALL GUARANTEE ALL WORK TO THE CITY OF SIERRA VISTA AGAINST DEFECTIVE WORKMANSHIP OR MATERIALS FOR A PERIOD OF TWO YEARS FROM THE DATE OF ITS FINAL ACCEPTANCE BY THE CITY OF SIERRA VISTA.
15. ALL EXISTING PROPERTY IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED TO THEIR ORIGINAL CONDITION OR BETTER BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY.
16. UPON COMPLETION OF CONSTRUCTION, AS-BUILT DRAWINGS SHALL BE SUBMITTED TO THE DEPARTMENT OF PUBLIC WORKS BY THE CONTRACTOR IN PDF FORMAT FOR APPROVAL. NO FINAL ACCEPTANCE WILL BE ISSUED UNTIL AS-BUILT PLANS HAVE BEEN SUBMITTED AND ACCEPTED BY THE CITY OF SIERRA VISTA.
17. ALL CONCRETE SHALL BE CLASS 'A' (3000 PSI) PER MAG SECTION 725, UNLESS OTHERWISE SPECIFIED ON THE PROJECT PLANS OR SPECIAL PROVISIONS.
18. AN APPROVED SET OF PLANS SHALL BE MAINTAINED ON THE JOB SITE AT ALL TIMES WORK IS IN PROGRESS. DEVIATION FROM THE PLANS WILL NOT BE ALLOWED WITHOUT AN APPROVAL FROM THE PROJECT ENGINEER AND CITY OF SIERRA VISTA.
19. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND COORDINATE SITE CONDITIONS WITH THE DRAWINGS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES AND OMISSIONS SHALL BE RESOLVED WITH THE PROJECT ENGINEER AND CITY OF SIERRA VISTA.
20. A COPY OF THE CURRENT STORM WATER POLLUTION PREVENTION PLAN AND NOTICE OF INTENT SHALL BE AVAILABLE IN ACCORDANCE WITH AZPDES CONSTRUCTION GENERAL PERMIT.

21. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR CLEANING TRUCKS AND/OR OTHER EQUIPMENT PRIOR TO ENTERING PUBLIC STREETS/PROPERTY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS AND TAKE WHATEVER MEASURES NECESSARY TO ENSURE THAT ALL ROADS ARE MAINTAINED IN A CLEAN, MUD- AND DUST- FREE CONDITION AT ALL TIMES.
22. THE CONTRACTOR SHALL TAKE MEASURES TO ENSURE THAT PROPER AMBIENT/CONDITION TEMPERATURES ARE MET DURING CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER AND THE CITY OF SIERRA VISTA.
23. THE CONTRACTOR SHALL NOT DISTURB EXISTING GRADES WITHIN A 10 FT RADIUS OF EXISTING UTILITY POLES, UTILITY POLE FOUNDATIONS, AND/OR UTILITY PEDESTALS, UNLESS SPECIFICALLY IDENTIFIED ON THE PLANS, AND APPROVED BY THE UTILITY COMPANY.
24. THE CONTRACTOR SHALL REMOVE ALL TEMPORARY CONSTRUCTION MATERIALS (IE: SANDBAGS, FORMS, ETC.), ONCE PROJECT IS COMPLETED.

**GENERAL NOTES: SEWER AND WATER NOTES**

1. OWNER SHALL OBTAIN A "CITY OF SIERRA VISTA CERTIFICATE OF APPROVAL TO CONSTRUCT WATER FACILITIES" AND AN "ADEQ CONSTRUCTION AUTHORIZATION FOR A SEWAGE COLLECTION SYSTEM TYPE 4.01 GENERAL PERMIT" PRIOR TO CONSTRUCTION OF WATER OR SEWER LINES.
2. ALL SEWER CONSTRUCTION AND MATERIALS SHALL BE DONE IN ACCORDANCE WITH ARIZONA ADMINISTRATIVE CODE, R18-9-E301; MAG STANDARD SPECIFICATION SECTION 615; AND APPLICABLE MAG OR CITY OF SIERRA VISTA STANDARD DETAILS.
3. ALL WATER CONSTRUCTION AND MATERIALS SHALL BE DONE IN ACCORDANCE WITH ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING BULLETIN NO. 10, "GUIDELINES FOR THE CONSTRUCTION OF WATER SYSTEMS".
4. COVER EACH SEWER LINE WITH AT LEAST 3 FEET OF EARTH COVER MEETING THE REQUIREMENTS OF ARIZONA ADMINISTRATIVE CODE, R18-9-E301-4.01 (D)(2)(b). IF SITE SPECIFIC LIMITATIONS PREVENT 3 FEET OF EARTH COVER OVER A SEWER MAINLINE THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE CITY OF SIERRA VISTA PROVIDING DETAILS REGARDING THEIR FINDINGS. THE PROJECT ENGINEER (REGISTRANT) SHALL PROVIDE ALTERNATIVE MEASURES RECOMMENDED FOR THE AREA, CERTIFYING THE MAXIMUM COVER ATTAINABLE FOR APPROVAL BY THE CITY OF SIERRA VISTA'S ENGINEERING DEPARTMENT. AT MINIMUM, THE REGISTRANT SHALL PROPOSE THAT THIS AREA BE CONSTRUCTED OF DUCTILE IRON PIPE, OR OTHER DESIGN EQUIVALENT OF GREATER TENSILE AND COMPRESSIVE STRENGTH; AND NOTE CHANGES SHALL BE MADE ON THE CONSTRUCTION PLANS.
5. BEDDING AND BACKFILL SHALL BE PER MAG SECTION 601.4.4 AS MODIFIED BY THE SIERRA VISTA DEVELOPMENT CODE, SECTION 151.08.011 AND CITY OF SIERRA VISTA STANDARD DETAILS SV200-3 AND SV200-4.
6. OPERATION OF WATERLINES SHALL NOT BEGIN UNTIL A "CITY OF SIERRA VISTA APPROVAL OF CONSTRUCTION" IS ISSUED IN ACCORDANCE WITH AAC R18-5-507.

7. ALL MATERIALS OR PRODUCTS THAT COME INTO CONTACT WITH THE DRINKING WATER SHALL CONFORM TO NATIONAL SANITATION FOUNDATION STANDARD 61, AMENDED AS OF 2016.
8. A WATER MAIN SHALL NOT BE PLACED:
  - A. WITHIN SIX FEET, HORIZONTAL DISTANCE, AND BELOW TWO FEET, VERTICAL DISTANCE, ABOVE THE TOP OF A SEWER MAIN UNLESS EXTRA PROTECTION IS PROVIDED. EXTRA PROTECTION SHALL CONSIST OF CONSTRUCTING THE SEWER MAIN WITH MECHANICAL JOINT DUCTILE IRON PIPE OR WITH SLIP-JOINT DUCTILE IRON PIPE IF JOINT RESTRAINT IS PROVIDED. ALTERNATE EXTRA PROTECTION SHALL CONSIST OF ENCASING BOTH THE WATER AND SEWER MAINS IN AT LEAST SIX INCHES OF CONCRETE FOR AT LEAST TEN FEET BEYOND THE AREA COVERED BY THIS SUBPARAGRAPH.
  - B. WITHIN TWO FEET HORIZONTALLY AND TWO FEET BELOW THE SEWER MAIN.
9. NO WATER PIPE SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF A SEWER MANHOLE. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATER MAINS AND MANHOLES SHALL BE SIX FEET.
10. AIR RELEASE VALVES, VACUUM RELEASE VALVES, FIRE HYDRANTS, OR OTHER SUITABLE MEANS OF AIR CONTROL SHALL BE INSTALLED AT HIGH POINTS IN A WATER LINE OR WHERE A LONG LINE CHANGES SLOPE.
11. FIRE HYDRANTS SHALL BE PAINTED CHROME YELLOW.
12. SEWER BACKFLOW PREVENTION VALVES WITH DUAL CLEAN OUTS SHALL BE INSTALLED AT ALL LATERAL SERVICES.
13. ALL HOME CONNECTION SEWER LINES ARE PRIVATE AND SHALL BE DESIGNED TO MEET THE REQUIREMENTS OF THE INTERNATIONAL PLUMBING CODE, LATEST EDITION.
14. ALL WATER LINES SHALL BE DISINFECTED IN ACCORDANCE WITH ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING BULLETIN NO. 8, "DISINFECTION OF WATER SYSTEMS" OR ANSI / AWWA C601.
15. LEAKAGE TESTING IS REQUIRED FOR 100% OF THE MANHOLES. THE PROCEDURE MUST BE IN ACCORDANCE WITH AAC R18-9-E301(D)(3)(e) AND ASTM C1244-02e1 (2002). STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY NEGATIVE AIR PRESSURE (VACUUM) TEST.
16. PERFORM A UNIFORM SLOPE TEST OF THE TOTAL LENGTH OF SEWER LINES IN ACCORDANCE WITH AAC R18-9-E301(D)(2)(k) (VIDEO CAMERA INSPECTION).
17. LOW PRESSURE AIR TESTING OF EACH SEWER LINE SHALL BE PERFORMED IN ACCORDANCE WITH AAC R18-9-E301(D)(2)(j) (USE ASTM -F 1417-92 (1998)). MAG STANDARD SPECIFICATION SECTION 615.11(A) DOES NOT APPLY.
18. PERFORM A DEFLECTION TEST OF THE TOTAL LENGTH OF SEWER LINES IN

ACCORDANCE WITH MAG STANDARD SPECIFICATION 611.3(C) AND R18-9-E301(D)(2)(i) . TEST FOR DEFLECTION BY PULLING A MANDREL THROUGH THE PIPE THAT HAS AN OVERALL DIAMETER 5% LESS THAN THE DIAMETER OF THE PIPE. IF REQUIRED, THE PROJECT ENGINEER MAY REQUEST A TEST WITH A MANDREL THAT IS 7-1/2% SMALLER THAN THE PIPE DIAMETER BEFORE THE END OF THE WARRANTY PERIOD.

19. DURING CONSTRUCTION, ALL SEWER LINES SHALL BE PLUGGED TO PREVENT INFLOW OF MUD, DIRT, OR RAIN WATER INTO THE EXISTING OR NEW SEWER SYSTEM. NEW LINES UNDER CONSTRUCTION SHALL BE PLUGGED AT THE DOWNSTREAM MANHOLE AND THE UPSTREAM END OF THE PIPE. PLUGS MAY ONLY BE REMOVED DURING ACTIVE CONSTRUCTION. PLUGS LEFT IN PLACE DURING NON-WORK HOURS SHALL BE TIED TO THE MANHOLE STEPS TO PREVENT PLUGS FROM WASHING INTO PIPE. IN NO CASE SHALL A PIPE UNDER CONSTRUCTION BE LEFT UNPLUGGED DURING NON-WORK HOURS. ALL PLUGS USED SHALL BE SPECIFICALLY DESIGNED FOR PLUGGING SEWER LINES. PLUGS SHALL FORM A WATERTIGHT SEAL. THE PLUG SHALL BE SEATED FIRMLY INTO THE PIPE USING AIR PRESSURE OR A MECHANICAL-TYPE SYSTEM. PLYWOOD, BRICKS, TAPE, OR OTHER PLUGS DEEMED UNSUITABLE BY CITY INSPECTORS WILL NOT BE ALLOWED. THE CONTRACTOR WILL REMOVE AND REPLACE PLUGS AS NEEDED FOR CONSTRUCTION AND INSPECTION PURPOSES. PLUGS SHALL REMAIN IN PLACE UNTIL ALL INSPECTIONS HAVE BEEN COMPLETED AND THE SEWER APPROVED BY CITY INSPECTORS.
20. ACCESS TO LIVE SEWER LINES, MANHOLES AND CLEANOUTS MUST BE MAINTAINED FOR MAINTENANCE AT ALL TIMES DURING CONSTRUCTION. MANHOLE ACCESSES AND APPROACHES MUST BE ACCESSIBLE BY CITY MAINTENANCE EQUIPMENT ONCE CONSTRUCTION IS COMPLETED.
21. ALL NEW MANHOLES SHALL BE ECCENTRIC CONICAL TOP MANHOLES, UNLESS OTHERWISE APPROVED BY THE CITY OF SIERRA VISTA.
22. ADDING A NEW MANHOLE TO AN EXISTING LINE: A CAST-IN-PLACE CONCRETE BASE AS PER MAG SECTION 725 (CLASS 'A' CONCRETE) SHALL BE POURED UP TO THE CENTERLINE OF THE EXISTING SEWER. AFTER CONCRETE HAS CURED, THE BOTTOM MANHOLE BARREL SECTION IS SET IN-PLACE AND PROPERLY FASTENED AND SEALED; THEN, AT THE NEAREST UPSTREAM MANHOLE, BLOCK FLOW TEMPORARILY. REMOVE THE REQUIRED PORTION OF PIPE INSIDE OF THE NEW MANHOLE AND RESTORE SERVICE WHILE CONSTRUCTION CONTINUES.
23. MANHOLE COVERS ARE TO BE IN ACCORDANCE WITH MAG STANDARD DETAILS 423-1 AND 423-2. COVER TO BE AT LEAST 24 INCHES IN DIAMETER WHEN INSTALLED ON A 48-INCH MANHOLE OR AT LEAST 30 INCHES IN DIAMETER WHEN INSTALLED ON A 60-INCH MANHOLE. COVER TO BE TRAFFIC RATED FOR H-20 LOADING. LETTERING ON MANHOLE COVER SHALL BE "SANITARY SEWER" IN ACCORDANCE WITH MAG STANDARD DETAIL 423-1 AND 423-2.
24. WATERTIGHT MANHOLE COVERS ARE TO BE IN ACCORDANCE WITH MAG STANDARD DETAILS 424-1 AND 424-2 AND SHALL MEET THE REQUIREMENTS OF THE PREVIOUS NOTE.
25. THE CONTRACTOR SHALL INSTALL ALL FRAMES AND COVERS FOR MANHOLES AND CLEANOUTS TO THE FINISHED GRADE IN ACCORDANCE WITH THE CITY OF SIERRA VISTA STANDARD DETAILS, AS APPLICABLE.

26. ANY MANHOLES THAT ARE LOCATED IN AREAS THAT ARE **UNPAVED** SHALL BE RAISED TO 4" ABOVE THE HIGHEST ADJACENT GRADE. A CONCRETE COLLAR SHALL BE PLACED AROUND THE EXPOSED PORTIONS OF THE MANHOLE BARREL. THICKNESS OF THE CONCRETE COLLAR TO BE AT LEAST ONE FOOT (MEASURED PERPENDICULAR TO THE BARREL). REF: CITY OF SIERRA VISTA STANDARD CONSTRUCTION DETAIL SV422-2.
27. ANY MANHOLES THAT ARE LOCATED IN AREAS THAT ARE **PAVED** SHALL BE CONSTRUCTED WITH A ONE-FOOT CONCRETE COLLAR SURROUNDING THE MANHOLE, PER CITY OF SIERRA VISTA STANDARD CONSTRUCTION DETAIL SV422-1.
28. EXISTING BRICK MANHOLES ARE TO BE COMPLETELY REPLACED WITH CONCRETE MANHOLES. NO NEW CONNECTION SHALL BE MADE TO AN EXISTING BRICK MANHOLE. ALL EXISTING BRICK MANHOLES THAT REQUIRE ADJUSTMENT TO NEW FINISHED GRADE SHALL BE COMPLETELY REPLACED.
29. CITY OF SIERRA VISTA SEWER MANHOLES SHALL HAVE STEPS AND CONSTRUCTED PER CITY OF SIERRA VISTA STANDARD CONSTRUCTION DETAILS. THE DISTANCE BETWEEN THE TOP STEP AND THE RIM SHALL NOT EXCEED 24 INCHES.
30. THE CONTRACTOR SHALL INSTALL 14-GAUGE TRACER WIRE BETWEEN MANHOLES FOR ALL SEWER MAINS. MAINLINE TRACER WIRE SHALL TERMINATE INSIDE THE MANHOLE IMMEDIATELY UNDER THE RIM AND ON TOP OF THE LAST GRADE RING, LEAVING 1-FOOT OF WIRE EXPOSED WITHIN THE MANHOLE.
31. THE CONTRACTOR SHALL INSTALL 12-GAUGE BARE COPPER GROUND WIRES AT EACH MANHOLE FOR ALL SEWER MAINS. GROUND WIRE SHALL TERMINATE INSIDE THE MANHOLE IMMEDIATELY UNDER THE RIM AND ON TOP OF THE LAST GRADE RING, LEAVING 1-FOOT OF WIRE EXPOSED WITHIN THE MANHOLE. AT LEAST 10 FEET OF GROUND WIRE SHALL BE BURIED BESIDE THE MANHOLE.
32. THE CONTRACTOR SHALL INSTALL 14-GAUGE TRACER FROM THE SEWER MAINLINE PIPE ALONG EACH LATERAL, FOR THE FULL LENGTH OF THE LATERAL. THE TRACER WIRE TO BE SECURED EVERY 10-FEET AND TERMINATED AT A CLEAN-OUT RISER BOX AT FINISHED GRADE. STRIP THE LAST 1 FOOT OF THE TRACER WIRE AT THE MAINLINE SEWER. LEAVE A MINIMUM OF 1-FOOT OF WIRE EXPOSED ABOVE GRADE AT THE CLEAN OUT.
33. THE CONTRACTOR SHALL INSTALL 12-GAUGE BARE COPPER GROUND WIRES ALONG EACH LATERAL, FOR THE FIRST 10 FEET OF THE LATERAL FROM THE EDGE OF THE RIGHT-OF-WAY. GROUND WIRE TO BE SECURED EVERY 5 FEET AND TERMINATED AT A CLEAN-OUT RISER AND METER BOX AT FINISHED GRADE. LEAVE A MINIMUM OF 1-FOOT OF WIRE EXPOSED ABOVE GRADE.
34. TRACER WIRES SHALL BE A #14 AWG FULLY ANNEALED, HIGH CARBON 1055 GRADE STEEL, HIGH STRENGTH SOLID COPPER-CLAD STEEL CONDUCTOR RATED AT 30 VOLTS. INSULATION TO BE GREEN 30 MIL, HIGH-DENSITY POLYETHYLENE (HDPE) INSULATION RATED FOR DIRECT BURIAL USE.

CONDUCTOR MUST BE AT 21% CONDUCTIVITY FOR LOCATE PURPOSES.  
MINIMUM BREAK LOAD TO BE 280 LBS.

35. THE CONTRACTOR SHALL NOTIFY THE CITY OF SIERRA VISTA UPON THE INSTALLATION OF ALL TRACER WIRES FOR TESTING. THE CONTRACTOR SHALL NOT COMMENCE PAVING OPERATIONS IN AREAS WHERE TRACER WIRE IS LOCATED UNDER THE ROADWAY PRISM, UNTIL CITY OF SIERRA VISTA (OR UTILITY) HAS TESTED THE TRACER WIRE CONNECTIVITY, AND IT HAS PASSED INSPECTION.

#### **GENERAL NOTES: ROADWAY AND STORM DRAIN NOTES**

1. PAVEMENT MIX DESIGN SHALL BE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS OR BE ON FILE WITH SAID DEPARTMENT.
2. IF THE CONTRACTOR BREAKS INTO THE BASE/SUB-BASE MATERIAL DURING PAVEMENT MILLING/REMOVAL OPERATIONS, ANY DISTURBED MATERIAL SHALL BE REPLACED, RE-SHAPED, RE-GRADED, AND RE-COMPACTED TO "FINISHED GRADE" AT THE DIRECTION OF THE PROJECT ENGINEER, PRIOR TO THE PLACEMENT OF NEW ASPHALT CONCRETE. SEE CITY OF SIERRA VISTA STANDARD CONSTRUCTION DETAILS SV200-3 AND SV200-4 FOR BASE MATERIAL AND COMPACTION REQUIREMENTS.
3. PAVEMENT REPLACEMENT WITH CITY APPROVED HOT MIX AC SHALL BE INSTALLED PER SIERRA VISTA STANDARD CONSTRUCTION DETAIL SV-200-1-A, SV200-3 AND SV200-4.
4. CONTRACTOR SHALL SAW CUT, TACK, AND SEAL ALL JOINTS AT ALL STREET CUTS. SPADE CUT NOT ACCEPTABLE.
5. CONTRACTOR SHALL CRACK SEAL ALL SEAMS BETWEEN NEW/EXISTING ASPHALT OR CONCRETE. SEALANT MUST BE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS OR BE ON FILE WITH SAID DEPARTMENT.
6. ALL FILLED AND COMPACTED TRENCHES IN EXISTING STREETS SHALL BE PATCHED WITH ASPHALT WITHIN AT LEAST 48 HOURS. IF RAIN IS IMMINENT, THE TRENCH SHALL BE PAVED IMMEDIATELY, OR OTHER MEASURES TAKEN, TO PREVENT RAINWATER FROM SATURATING THE AGGREGATE BASE BACKFILL MATERIAL. COLD MIX ASPHALT MAY BE USED AS AN INTERIM PATCH UNTIL IT IS PRACTICAL TO PLACE PERMANENT HOT MIX PATCH, UPON THE APPROVAL OF THE PUBLIC WORKS DEPARTMENT.
7. CONTRACTORS SHALL INSTALL ALL FRAMES AND COVERS FOR MANHOLES AND CLEANOUTS TO THE FINISHED GRADE IN ACCORDANCE WITH THE CITY OF SIERRA VISTA STANDARD CONSTRUCTION DETAILS, AS APPLICABLE. ALSO THE CONDITIONS STATED IN THE **GENERAL NOTES: SEWER AND WATER NOTES** APPLY.
8. WHEN TRANSITIONING FROM FOUR-INCH ROLLED CURB TO SIX-INCH VERTICAL CURB, TRANSITION OF THE VERTICAL TWO INCHES MUST OCCUR IN THE VERTICAL CURB SECTION.
9. VALLEY GUTTERS, SPANDRELS, CURB AND GUTTER TO BE CONSTRUCTED PRIOR TO PLACEMENT OF NEW ASPHALT. CONCRETE SHALL BE CURED FOR A PERIOD

OF AT LEAST SEVEN DAYS AFTER PLACEMENT AND SHALL RECEIVE A TACK COAT OF EMULSIFIED ASPHALT CUT BACK WITH 50% WATER PRIOR TO PLACEMENT OF NEW ASPHALT, UNLESS OTHERWISE APPROVED BY THE CITY.

10. WHEN THE PAVEMENT SECTION SLOPES AWAY FROM THE GUTTER, THE SLOPE OF THE GUTTER SHALL MATCH THE PAVEMENT CROSS SLOPE, THEREFORE THE GUTTER DEPRESSION IS NOT APPLICABLE.
11. INSTALL SURVEY MONUMENTS PER CITY OF SIERRA VISTA STANDARD CONSTRUCTION DETAIL SV120.
12. WHERE SEWER MANHOLES ARE AT STREET INTERSECTIONS, 4 PK NAILS SHALL BE PLACED AROUND MANHOLE TO CREATE AN "X" OUT OF THE MANHOLE IN LIEU OF A SURVEY MONUMENT.
13. ALL CORRUGATED METAL PIPES (CMP'S) AND JOINTS SHALL BE GALVANIZED AND COATED WITH BITUMINOUS COATING PER THE REQUIREMENTS OF MAG STANDARD SPECIFICATIONS SECTIONS 621 AND 760 OR BE ALUMINUM-COATED TYPE-2, OR OTHERWISE APPROVED BY THE ENGINEER.
14. JOINTS IN CMP SHALL BE MADE WATERTIGHT THROUGH THE USE OF BITUMINOUS MASTIC OR CIRCULAR RUBBER GASKETS. MATERIALS AND INSTALLATION SHALL BE PER THE REQUIREMENTS OF MAG STANDARD SPECIFICATIONS SECTION 621.
15. SIDEWALKS SHALL BE CONSTRUCTED TO A THICKNESS OF 4 INCHES, UNLESS SIDEWALK IS LOCATED WITHIN A DRIVEWAY PRISM WHERE THE THICKNESS SHALL BE AT LEAST 5 INCHES PER CITY OF SIERRA VISTA STANDARD CONSTRUCTION DETAIL SV230.
16. CONTRACTOR SHALL SAWCUT EXISTING SIDEWALK AND CURBS AT THE NEAREST JOINT.
17. CONTRACTOR SHALL INSTALL EXPANSION JOINTS BETWEEN NEW AND EXISTING CONCRETE.

**GENERAL NOTES: SIGNALS AND LIGHTING**

1. ALL TRAFFIC SIGNAL EQUIPMENT AND CONSTRUCTION SHALL CONFORM TO THE 2021 ADOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE MOST RECENT ADOT TRAFFIC SIGNALS AND LIGHTING STANDARD DRAWINGS, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL SUBMIT PROPOSED SIGNAL AND ROADWAY LIGHTING EQUIPMENT LIST AND CUTSHEETS FOR APPROVAL BY THE DEPARTMENT OF PUBLIC WORKS BEFORE ORDERING AND COMMENCING WORK.
3. SIGNAL CONDUCTORS SHALL BE #14 AWG IMSA 19-1 CABLE, 20 CONDUCTOR, SIGNAL, EVP, AND VIDEO CABLES SHALL BE UNSPLICED FROM THE CONTROLLER CABINET TO THE TRAFFIC SIGNAL EQUIPMENT SERVED. LUMINAIRE (CIRCUIT) WIRING MAY BE SPLICED IN THE NEAREST PULL BOX. SPLICES FOR STREET LIGHTING SHALL BE MADE WITH APPROPRIATE WIRE NUTS AND APPROVED "SCOTCH CAST KITS" OR APPROVED EQUAL. POLE INTERIOR CABLE SIZES SHALL BE #14 AWG AS FOLLOWS:

4 SECTION HEAD - 7 COND.

3 SECTION HEAD - 4 COND.

4. ALL SIGNAL HEADS SHALL BE ALUMINUM AND PAINTED TRAFFIC SIGNAL YELLOW. ALL SIGNAL INDICATION SHALL BE LED.
5. ALL BACKPLATES FOR SIGNAL FACES SHALL BE SOLID, 5", BLACK
6. EACH POLE SHALL HAVE A 25 FT "UFER" GROUND COIL IN THE FOUNDATION. SERVICE CABINETS SHALL HAVE GROUND RODS INSTALLED AS SHOWN IN THE PLANS.
7. CONTRACTOR SHALL INSTALL ¾ INCH X 10 INCH BONDED COPPER GROUND ROD WITHIN EACH TRAFFIC SIGNAL PULL BOX.
8. THE CONTRACTOR SHALL PERFORM A GROUND RESISTANCE TEST FOR EACH INSTALLED GROUND ROD AND POLE FOUNDATION. GROUNDING COIL TEST SHALL BE PERFORMED IN ACCORDANCE WITH ADOT STANDARD SPECIFICATIONS SECTION 732-3.03. THE GROUND RESISTANCE FOR EACH INSTALLED GROUND ROD SHALL BE 25 OHMS OR LESS.
9. ALL POLE FOUNDATIONS SHALL BE INSPECTED BY THE CITY OF SIERRA VISTA BUILDING AND SIGNAL DEPARTMENTS PRIOR TO POURING CONCRETE.
10. THE CONTRACTOR SHALL OBTAIN A BUILDING PERMIT AND COORDINATE INSPECTIONS REQUIRED FOR "GREEN TAG" TO COMMENCE ELECTRICAL SERVICE.
11. ALL TRAFFIC SIGNAL POLES SHALL BE TAPERED GALVANIZED STEEL.
12. ALL PULL BOXES SHALL BE LEFT IN A CLEAN, UNCOVERED CONDITION TO FINISHED ADJACENT GRADE UPON COMPLETION OF THE PROJECT.
13. CONTRACTOR SHALL INSTALL VEHICLE DETECTION CAMERAS ON LUMINAIRE MAST ARMS LOCATED 3 FT FROM CENTER OF LUMINAIRE WITH THE DEPARTMENT OF PUBLIC WORKS APPROVED EQUIPMENT. ALL WIRING SHALL BE INTERNAL TO POLES AND MAST ARMS TO THE MAXIMUM EXTENT POSSIBLE AND SHALL EXIT THE MAST ARM AT A POINT 4 FT FROM THE CENTER OF THE LUMINAIRE.
14. CITY PERSONNEL SHALL CONNECT ALL WIRING WITHIN THE TRAFFIC SIGNAL CABINET.
15. LED STREET NAME SIGNS SHALL BE RIGID POLE MOUNTED, USING MANUFACTURER'S MOUNTING BRACKET AND HARDWARE.
16. TYPE V AND TYPE VII SIGNAL MOUNTS ON "Q" POLES SHALL HAVE PIPE NIPPLES INCREASED IN LENGTH TO 27-½ INCHES. PIPE NIPPLES ON R POLES SHALL BE INCREASED IN LENGTH TO 28 INCHES.
17. THE TOPS OF ALL FOUNDATIONS AND BASES SHALL BE FLUSH WITH THE ADJACENT FINISHED GRADE, UNLESS APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.
18. CONTRACTOR SHALL PROVIDE FILL AROUND FOUNDATIONS AND PULL BOXES AS NECESSARY FOR FULL STRUCTURAL SUPPORT.

19. NEW CONDUIT UNDER EXISTING PAVEMENT SHALL BE BORED UNDERGROUND, UNLESS OTHERWISE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS. NEW CONDUIT OUTSIDE OF THE PAVED ROADWAY AREA CAN BE TRENCHED.
20. ALL SIGNAL ITEMS SCHEDULED FOR REMOVAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR WITH THE EXCEPTION OF: TRAFFIC SIGNAL CABINET, TRAFFIC CAMERAS, PEDESTRIAN COUNTDOWN MODULES, PRE-EMPTION DETECTOR, AND SIGNS. THESE ITEMS SHALL BE SALVAGED TO THE CITY OF SIERRA VISTA.

#### **GENERAL NOTES: PAVEMENT MARKING & SIGNAGE NOTES**

1. THE CONTRACTOR SHALL ENSURE THAT THE FINAL PAVEMENT SURFACE COURSE IS PLACED SO THAT THE STRIPING IS OFFSET 1 FOOT CLEAR OF THE CONSTRUCTION JOINT, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT AND INSTALLATION OF TEMPORARY PAVEMENT MARKERS (CHIPSEAL MARKERS, ETC.) ON THE FINAL SURFACE COURSE FOLLOWING CONTROL POINTS THAT HAVE BEEN SET NO MORE THAN 50 FEET APART ALONG THE LINES TO BE STRIPED. SAID MARKERS SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL PAVEMENT STRIPING IS IN PLACE AT WHICH TIME, ALL TEMPORARY MARKERS SHALL BE REMOVED PRIOR TO STRIPING.
3. THE DIMENSIONS SHOWN TO PAVEMENT STRIPING ARE TO THE CENTER OF THE STRIPING OR, IN THE CASE OF DOUBLE STRIPING, TO THE CENTER OF THE DOUBLE STRIPING.
4. ALL PAVEMENT STRIPING SHALL BE MEASURED, OFFSET, AND INSTALLED FROM THE CENTERLINE OF THE ROADWAY/SHARED USE PATH, NOT THE CURB LINE, UNLESS OTHERWISE DIRECTED BY THE CITY.
5. WITHIN TWO WEEKS OF THE PLACEMENT OF THE FINAL PAVEMENT SURFACE, TEMPORARY CENTER LINES, LANE LINES, EDGE LINES, STOP BARS, AND PAVEMENT ARROWS SHALL BE STRIPED WITH ONE APPLICATION OF STANDARD REFLECTORIZED TRAFFIC PAINT AT THE LOCATIONS OF THE PERMANENT STRIPING.
6. TEMPORARY TRAFFIC STRIPING PAINT SHALL HAVE A MAXIMUM THICKNESS OF 10 MILS WET (5 MILS DRY). ALL PAINTED STRIPING SHALL BE 4 INCHES WIDE. HOWEVER, EACH PAINTED STOP BAR SHALL BE AT LEAST 12 INCHES WIDE.
7. THE FINAL STRIPING SHALL BE 90 MIL (0.090 INCH) THICK EXTRUDED ALKYD THERMOPLASTIC REFLECTORIZED STRIPING PLACED OVER THE EXISTING/TEMPORARY PAINTED STRIPING AT LEAST 30 CALENDAR DAYS AFTER THE FINAL PAVEMENT SURFACE IS INSTALLED, UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT OF PUBLIC WORKS, ALL OTHER PERMANENT THERMOPLASTIC PAVEMENT MARKINGS SHALL BE APPLIED AT THE SAME TIME.
8. ALL FINAL STOP BARS, PAVEMENT ARROWS, AND "ONLY" LEGENDS SHALL BE WHITE 90 MIL (0.090 INCH) THICK ALKYD EXTRUDED THERMOPLASTIC REFLECTORIZED MARKINGS.

9. SINGLE ARROWS AND "ONLY" LEGEND SHALL BE INSTALL IN ACCORDANCE WITH ADOT STD, DWGS. M-10 AND M-11,
10. WHEN STRIPE OBLITERATION IS NECESSARY, IT SHALL BE ACCOMPLISHED BY APPROVED METHODS (WATER BLASTING). PAINTING OVER STRIPING, REMOVAL OF PAVEMENT, AND OVERLAYING PAVEMENT DO NOT CONSTITUTE STRIPE OBLITERATION.
11. ALL REFLECTIVE RAISED PAVEMENT MARKERS SHALL HAVE AN ABRASION RESISTANT COATING ON THE FACE OF THE PRISMATIC REFLECTORS AND SHALL CONFORM TO THE ADOT DETAILS OF STD. DWG. M-19. THEY SHALL BE INSTALLED WITH A BITUMINOUS ADHESIVE WHICH IS ON THE ADOT APPROVED PRODUCTS LIST.
12. ALL REFLECTIVE RAISED PAVEMENT MARKERS SHALL BE INSTALLED SO THAT THE REFLECTIVE FACE OF EACH MARKER IS FACING THE DIRECTION OF TRAFFIC AND IS PERPENDICULAR TO THE DIRECTION OF TRAFFIC FLOW.
13. WHERE RAISED PAVEMENT MARKERS ARE PLACED BETWEEN DOUBLE YELLOW STRIPING, THEY SHALL BE CENTERED IN THE 6 - INCH GAP BETWEEN THE LINES, EXCEPT AS INDICATED OTHERWISE ON THE PLANS. FOR BROKEN YELLOW STRIPING, THE MARKERS SHALL BE PLACED TO ALIGN WITH THE BROKEN YELLOW STRIPING. WHERE RAISED PAVEMENT MARKERS ARE PLACED ALONG SOLID WHITE STRIPING, THE NEAREST EDGE OF EACH MARKER SHALL BE OFFSET 2 INCHES FROM THE NEAREST EDGE OF THE STRIPING ON THE SIDE OF THE THROUGH LANE.
14. THE CONTRACTOR SHALL CLEAN THE ROADWAY SURFACE TO THE SATISFACTION OF THE CITY BY SWEEPING AND AIR-JET BLOWING IMMEDIATELY PRIOR TO THE PLACEMENT OF ALL PAVEMENT MARKINGS. THE ROADWAY SURFACE SHALL BE DRY AND THE AIR AND PAVEMENT TEMPERATURES SHALL NOT BE LESS THAN 55°F FOR THE PLACEMENT OF THERMOPLASTIC STRIPING.
15. THE PAVEMENT MARKING DRAWINGS ARE SCHEMATIC ONLY AND NOT TO SCALE. THE CONTRACTOR SHALL FOLLOW ALL DIMENSIONS AND DETAILS WHEN INSTALLING ALL PAVEMENT MARKINGS.
16. THE CONTRACTOR SHALL BREAK THE CENTER LINE AND EDGE LINE ACROSS ANY INTERSECTION WITH DEDICATED ROADWAYS, OR AS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. IN ADDITION, THE CONTRACTOR SHALL NOT PLACE ANY CENTERLINES WITHIN 10 FEET OF THE NEAREST EDGE OF PAVEMENT OF THE INTERSECTING ROADWAY.
17. THE CONTRACTOR SHALL SALVAGE ALL ROADWAY SIGNS, SIGN SUPPORTS, OBJECT MARKERS, AND MILEPOST MARKERS, AS DIRECTED BY THE CITY OF SIERRA VISTA. THE CONTRACTOR SHALL REPLACE ANY SIGNS, SIGN SUPPORTS, AND MARKERS DAMAGED AS A RESULT OF THE CONSTRUCTION, AT NO ADDITIONAL COST TO THE CITY.
18. THE RETRO-REFLECTIVE SHEETING ON ALL NEW SIGNS SHALL MEET THE CRITERIA ESTABLISHED IN SECTION 1007 OF THE ADOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.

## GENERAL NOTES: TRAFFIC CONTROL NOTES

1. ALL REQUIRED AND APPLICABLE TRAFFIC CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR AND SUBJECT TO REVIEW AND APPROVAL BY THE CITY AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. TRAFFIC CONTROL PLANS SHALL BE SUBMITTED TO THE CITY AT LEAST TWO WEEKS BEFORE USE OF THE PROPOSED PLAN.
2. TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
3. TRAFFIC CONTROL IMPACTING STATE HIGHWAYS AND COUNTY ROADS SHALL CONFORM TO ADOT REQUIREMENTS TO THE PERMITTING AGENCY. THE CONTRACTOR SHALL WORK WITH THE PERMITTING AGENCY TO SECURE THE REQUIRED ENCROACHMENT PERMITS. WORK SHALL NOT COMMENCE UNTIL PERMITS ARE APPROVED.
4. ALL EXISTING SIGNS IN CONFLICT WITH THE CONSTRUCTION SIGNS SHALL BE REMOVED, RELOCATED, OR COVERED IN PLACE, AS DIRECTED BY THE CITY OF SIERRA VISTA. THE CONTRACTOR SHALL STORE AND REINSTALL ITEMS WHICH HAVE BEEN REMOVED OR RELOCATED IN A MANNER APPROVED BY THE CITY OF SIERRA VISTA.
5. THE RETROREFLECTIVE SHEETING ON ALL CONSTRUCTION SIGNS SHALL MEET THE CRITERIA ESTABLISHED IN SECTION 1007 OF THE ADOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
6. ALL CONSTRUCTION SIGNS SHALL HAVE BLACK LETTERS ON AN ORANGE BACKGROUND, EXCEPT AS OTHERWISE APPROVED BY THE CITY OF SIERRA VISTA.
7. FOR SIGNS INSTALLED ON SPRING OR RIGID STANDS, SIGN MOUNTING HEIGHT IS A MINIMUM OF 1 FOOT ABOVE THE PAVEMENT.
8. EMBEDDED POSTS SHALL NOT BE USED IN PLACE OF SPRING OR RIGID SIGN STANDS NOR SHALL THEY BE USED FOR ANY ADVANCED WARNING SIGNS FOR THIS PROJECT.
9. CONSTRUCTION SIGNS SHALL NOT BE DISPLAYED TO TRAFFIC MORE THAN 30 MINUTES PRIOR TO THE ACTUAL START OF CONSTRUCTION. THESE SIGNS MAY BE INSTALLED SOONER BUT THEY MUST BE COVERED OR TURNED AWAY FROM TRAFFIC. THE COST FOR COVERING OR TURNING THEM SHALL BE CONSIDERED PART OF THE SIGN INSTALLATION COST. NO FURTHER COMPENSATION WILL BE MADE. THESE SIGNS SHALL BE REMOVED WITHIN 24 HOURS AFTER COMPLETION OF THE CONSTRUCTION ACTIVITIES, UNLESS OTHERWISE APPROVED BY THE CITY OF SIERRA VISTA.
10. ALL OVERNIGHT CONSTRUCTION TRAFFIC CONTROL SIGNAGE, BARRICADES SHALL BE PROPERLY LIT AND FUNCTIONING, PER MUTCD REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE A CONTACT PERSON WHO IS AVAILABLE 24 HOURS PER DAY, WEEKENDS, AND HOLIDAYS TO REMEDY ANY ISSUES DURING "NON-WORK HOURS".
11. ADVANCED WARNING CONSTRUCTION SIGNS SHALL BE PLACED ON ALL PUBLIC ROADS THAT WILL ACCESS THE CONSTRUCTION ZONE.

12. DRUMS, BARRICADES, AND VERTICAL PANELS SHALL BE PLACED PER MUTCD REQUIREMENTS.
13. REDUCTION OF SPEEDS IN WORK ZONES SHALL BE PROHIBITED UNLESS REQUESTED IN WRITING WITH A JUSTIFICATION TO THE CITY OF SIERRA VISTA FOR REVIEW AND APPROVAL.

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